Radiologic Case

Pelvic Fullness, Urgency and Frequency Following Lymphadenectomy

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A 60-year-old man presents with a diagnosis of prostatic carcinoma. He previously had a negative pelvic computed tomographic (CT) scan, followed by a staging lymphadenectomy. He returns four weeks following the procedure with symptoms of fullness in his pelvis, urinary urgency and frequency. CT scans of the pelvis are shown in Figure 1.

What is the differential diagnosis?

How would you confirm the diagnosis?

How would you treat this man?

SEE FOLLOWING PAGE FOR DIAGNOSIS AND DISCUSSION.

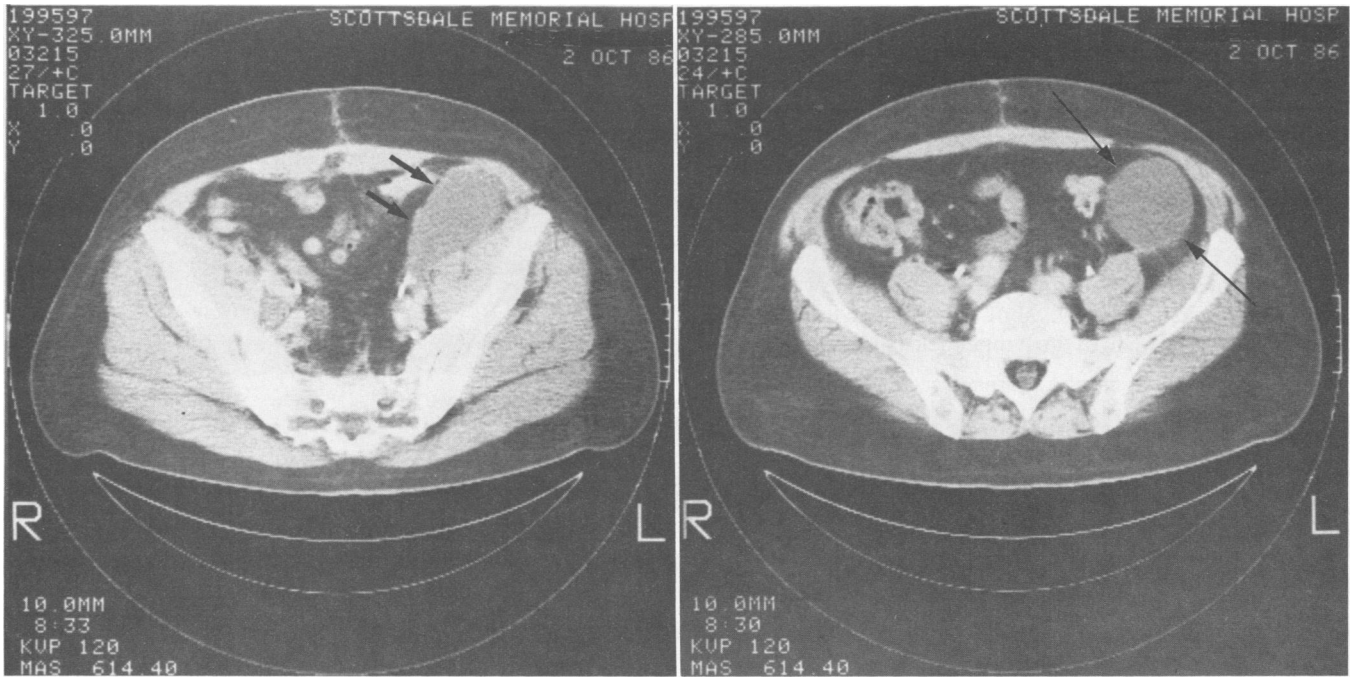

Figure 1.—Scans of the pelvis **(top** and **bottom)** show a cystic mass on the left **(arrows).**

(Spiegel RA, Hessel SJ, Katz ER, et al: Pelvic fullness, urgency and frequency following lymphadenectomy. West J Med 1987 Sep; 147:357-358)

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ANSWER: Pelvic lymphocele

The homogeneous fluid-filled mass arising from the pelvis is most likely a lymphocele. Urinoma, seroma, abscess, hematoma and homogeneous tumor mass must be included in the differential diagnosis. Although some of these can be clinically excluded in most cases, needle aspiration of the mass using ultrasound or CT guidance is a quick, simple way to define the cause of the process.

Lymphoceles result from surgical severance and inadequate closure of afferent lymphatic channels. They are a relatively common complication of major pelvic operations and occur in 25% of cases following pelvic lymphadenectomy, which is usually done for gynecologic or urologic cancer staging. They are often undiagnosed because most patients are asymptomatic. About 35% of lymphoceles are bilateral.

When lymphoceles become clinically evident, it is usually due to compressive effects due to increasing size, or to secondary infection. Many are incidentally found on follow-up abdominal imaging procedures, or at pelvic or abdominal examination. Common complaints or signs include bladder irritability, a feeling of fullness, obstructive uropathy, leg or pelvic edema or deterioration of renal function in a transplant patient. Infected lymphoceles are of particular concern in immunosuppressed patients.

Ultrasonography is the easiest method for identifying and following lymphoceles. CT is also sensitive and is most useful when ultrasonic visualization is obscured by bone or bowel gas. Using either modality, lymphoceles appear as cystic structures that arise from the pelvis and are perivascular in location (Figure 1).

Treatment of a lymphocele depends on the presenting symptoms. Because spontaneous regression is well documented, it is reasonable to follow asymptomatic lymphoceles. Needle aspiration with ultrasound or CT guidance can be therapeutic as well as diagnostic, but the recurrence rate after aspiration is high. External surgical drainage and internal marsupialization have been used in the past. Percutaneous catheter drainage is often successful and has less morbidity and mortality than surgical treatment. In this patient, CT-guided needle aspiration was done, with subsequent placement of a drainage catheter (Figure 2). Follow-up scans done two weeks after removal of the drainage tube showed no evidence of residual of the lymphocele (Figure 3).

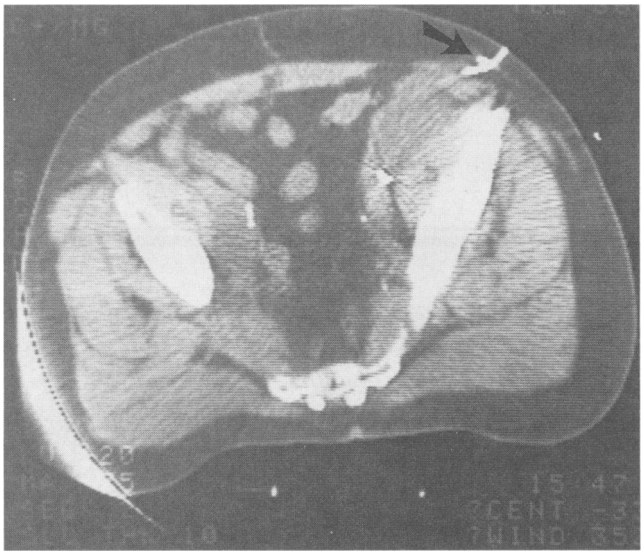

Figure 2.—A CT scan shows a catheter **(arrow)** in the lymphocele, which has decreased in size.

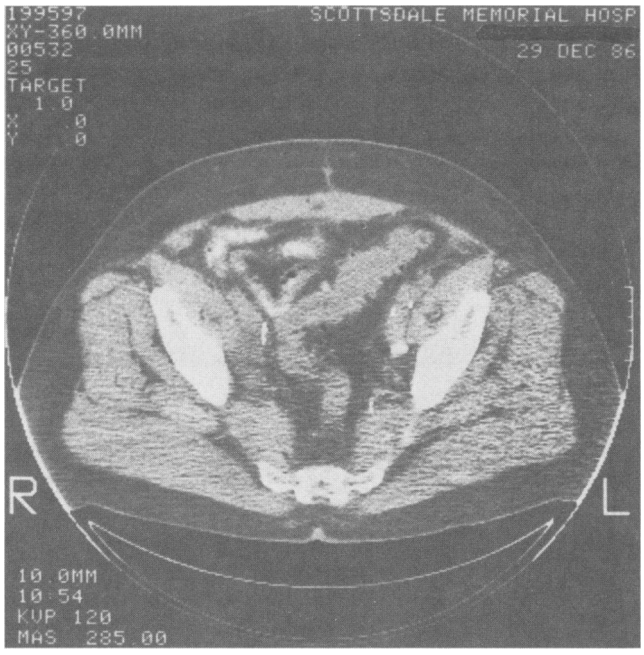

Figure 3.—A follow-up CT scan shows complete resolution of the lymphocele.

GENERAL REFERENCES

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